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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,034	04/15/2002	Joerg Hauptmann	8074-4 (S1564 SB/pra)	4548

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F. CHAU & ASSOCIATES, LLC
130 WOODBURY ROAD
WOODBURY, NY 11797

EXAMINER	
TRAN, KHANH C	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/031,034	HAUPTMANN ET AL.	
	Examiner	Art Unit	
	Khanh Tran	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on 12/27/2005 has been entered. Claims 23-34 are pending in this Office action.

Response to Arguments

2. Applicant's arguments, see pages 9-12, filed on 12/27/2005, with respect to the rejection(s) of claim(s) 12-22 under 35 U.S.C. 103(a) have been fully considered and are persuasive after Applicants cancelled claims 12-22. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kahl et al. U.S. Patent 5,969,567 and Amrany et al. U.S. Patent 6,067,316.

3. The objection to the Specification has been withdrawn after Applicants amended the Specification to correct the informalities. The Amendments to the Specification have been entered.

4. The objection of claims 12-13 and 15-22 has been withdrawn after Applicants cancelled claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 23-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kahl et al. U.S. Patent 5,969,567 in view of Amrany et al. U.S. Patent 6,067,316.

Regarding claim 23, Kahl et al. invention is directed to a circuit configuration, as shown in the FIGURE, for line adaptation and echo suppression includes a balance filter which is triggered by transmission signals and supplies output signals that are linked through a subtractor to a reception signal.

From the FIGURE, the transmission path 2d to 2a includes a D/A converter 4 to convert the digital transmission signal to the analog broadband signal.

Kahl et al. does not show in the FIGURE a digital frequency splitter in the transmission path as set forth in the application claim.

Amrany et al. invention is directed to a method for a communication to communicate both POTS and XDSL are provided. In column 6, line 20 to column 7 line 25, figure 4 illustrates the primary circuit design of an improved line card circuit in accordance with Amrany et al. teachings. The line card circuit combines the POTS signal and xDSL signals are combined into a single channel having a receive side and a transmit side.

On the transmit side, digital PCM data is received from the digital switch 50 (See FIG. 2) and expanded according to an A-law or mu-law algorithm at 120. Similarly, the xDSL signal received from the digital switch 50 may be passed through a similar block 122 for any transmit shaping that may be necessary. These signals are then combined by adder 124 (or modulator) and delivered to a digital to analog converter 126; see also figure 4.

In column 3, lines 3-25, ***Amrany et al. further expresses that the preferred embodiment includes a means for combining the PCM input and the xDSL input. This means may be an adder, or, alternatively, may be some other more complicated signal processing technique. In view of the foregoing disclosure, adder 124 performs equivalent function of the claimed digital frequency splitter.***

Amrany et al. teaches line interface card interfaces with the local loop and includes a bi-directional line for bi-directional communication with the signal line. Kahl et teaches a line interface card for line adaptation and echo suppression. Because, in column 4, lines 5-15, Kahl et al. further teaches the circuit configuration shown in the exemplary embodiment is preferably preceded by a non-illustrated two-wire/four-wire converter, which is connected in turn to a two-wire telephone line, one of ordinary skill in the art at the time the invention was made would have been motivated to adapt Amrany et al. teachings to Kahl et al. circuit for connecting subscriber equipment through a two-wire/four-wire converter to a two-wire telephone line.

Referring back to the FIGURE of Kahl et al. invention, the circuit further includes a reception path 1a to 1d, which divides the signal into voice signal and data signal. The

A/D converters 3 and 7 are provided on each path for converting the signals into digital signals. In column 3, lines 1-15, Kahl et al. teaches an analog balance filter 6a with transmission performance suitable for echo suppression is connected on the input side to an output of the digital/analog converter 4 and is accordingly triggered by the analog transmission signal 2a. The analog balance filter 6a corresponds to the claimed balance filter.

Regarding claim 24, referring to figure 4 of Amrany et al. invention, in column 6, lines 63 via column 7, line 10, the receive side further includes a programmable gain amplifier 142, which corresponds to the claimed circuit for automatic gain control of the received analog signals.

Regarding claim 25, as recited in claim 23, the balance filter 6a is an analog balance filter.

Regarding claim 26, in column 7, lines 10-25, Amrany et al. teaches that a band-pass filter or high-pass filter operates to filter out the lower frequency voice band signals.

Regarding claims 27-30, referring to figure 4 of Amrany et al. invention, a band-pass filter 148 (or high-pass filter) operates to filter out the lower frequency voice band signals, and thus delivers signals within the xDSL frequency band to the xDSL output.

The output of the analog to digital converter 144 is routed to a low pass filter 150, which serves to filter out the higher frequency xDSL signals, as well as noise signals, to deliver only that information in the voice frequency band to the PCM output.

Regarding claims 31-32, referring to figure 4 of Amrany et al. invention, as recited in claims 12 and 16, the output of the analog to digital converter 144 is routed to a low pass filter 150, which serves to filter out the higher frequency xDSL signals, as well as noise signals, to deliver only that information in the voice frequency band to the PCM output.

Regarding claim 33, in column 6, lines 45-63, referring to figure 4 of Amrany et al. invention, the outgoing analog signal is then passed through an equalization filter 128, which is filtered to provide greater emphasis on high frequency signals (by amplifying) than on the lower frequency, POTS signals. The signal output from the equalization filter 128 is then passed through line driver 130 and applied at 110 to the local loop 24. In light of the foregoing teachings, equalization filter 128 and line driver 130 constitutes the claimed power adaptation circuit.

Regarding claim 34, claim 34 is rejected on the same ground as for claim 23 because of similar scope.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

Khanh cong Tran 03/15/2006
Examiner KHANH TRAN